



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,146	05/16/2005	Dominique Conte	0579-1090	2394
466 7590 11/09/2009 YOUNG & THOMPSON 209 Madison Street Suite 500 Alexandria, VA 22314			EXAMINER WIECZOREK, MICHAEL P	
			ART UNIT 1792	PAPER NUMBER
			NOTIFICATION DATE 11/09/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

### Office Action Summary

**Application No.**

10/535,146

**Applicant(s)**

CONTE ET AL.

**Examiner**

Michael Wiczorek

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) 3,6,10,12,13,18 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-9,11,14-16,19 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Claims***

By amendment filed July 7, 2009, claims 1 through 16 and 18 through 24 have been amended. Claims 17 has been cancelled and claims 25 is new. Claims 3, 6, 10, 12, 13, 18 and 20 have been withdrawn from consideration as being nonelected species. Claims 1 through 16 and 18 through 25 are currently pending.

### ***Response to Arguments***

1. Applicant's arguments filed July 7, 2009 have been fully considered but they are not persuasive.
2. On pages 10 and 11, Applicant's argue that neither Souel nor Medwick teach applying a temporary adhesion enhancing layer onto the outermost layer of the lens for enhancing adhesion of the face of the lens with a lens retaining shoe when trimming the lens. Applicant is correct that neither Souel or Medwick explicitly teach that temporary protection layer also enhances adhesion but as was discussed in the previous Office Action based on the teachings of MacNutt it would have been obvious to applying a temporary protection layer having a surface energy higher than that of the outermost layer and being comprised of magnesium fluoride. Since the temporary protection layer of Souel in view of Medwick in further view of MacNutt comprises substantially the same properties as the layer claimed by applicant, it would be inherent that the temporary protection layer of layer of Souel in view of Medwick in further view of MacNutt would also enhance adhesion between the lens and a lens retaining shoe during trimming. The fact that applicant has recognized another advantage which would flow naturally from following

the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

3. Furthermore, Applicant argues that the teachings of Medwick are not applicable to the ophthalmic lenses of Souel because Medwick is directed to large glass substrates having protective coatings with thickness above 1 micron. Though Medwick does teach certain embodiments where the glass substrate is a large glass substrate like an architectural window, Medwick does clearly teach that the glass substrate may be of any type, having a composition of any optical properties and may be of any dimensions (Page 3 Paragraph 0023). Thus based on the teachings of Medwick it would be apparent to one of ordinary skill in the art that the teachings of Medwick would be applicable to other glass substrate not explicitly disclosed in the embodiments taught in the reference. As to Applicant's arguments concerning the thickness of the protective coating though Medwick teaches a *preferred* thickness of 1 to 2 micrometers, it does teach a range of up to 2 micrometers, thus encompassing the nanometer ranges disclosed within the claims. Furthermore, as was discussed in the previous Office Action, Medwick clearly teaches that the exact thickness of the protective coating selected for a particular application depends on several factors, such as the morphology of the coating, degree of protection desired, *the type of substrate*, ect. (Page 6 Paragraph 0044). Thus based on the teachings of Medwick it would have been obvious to one having ordinary skill in the art to apply the appropriate thickness of a protective coating to a small glass substrate like an ophthalmic lens.

4. On pages 14 and 15, Applicant argues that the claimed upper limit of 5 nm for the layer thickness provides unexpected results. This argument is not persuasive because applicant has not provided unexpected results for every thickness disclosed within the claimed range nor has it

shown unexpected results for every layer composition that can be used as a temporary adhesion enhancing layer.

5. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

#### *Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-2, 4-5, 7-9, 11, 14-16, 19, 21 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Souel et al (U.S. Patent 6,281,468) in view of Medwick et al (U.S. Patent Publication No. 2002/0176988) and MacNutt (U.S. Patent 2,536,075).

Souel et al teaches a method of marking the face of an ophthalmic lens (Column 1 Lines 6-10) wherein a low surface energy hydrophobic layer has been deposited over a high surface energy coating or the lens substrate (Column 3 Lines 7-25). The taught method involves positioning a mask having a configuration complementary to a required mark between the face of the lens to be marked and energizing discharge source in the form of a corona discharge (Column 2 Lines 7-24 and 46-50) and the source eliminates substantially the outermost low surface energy layer in order to reveal the substrate or underlying coating (Column 3 Lines 39-46).

Souel et al does not teach that there is deposited onto the outermost layer a temporary layer having a surface energy higher than that of the outermost layer and a thickness of less than about 5 nm to enable the discharge to act on the outermost layer through the temporary layer.

Medwick et al teaches a removable coating 16 for glass substrate 12 and glass substrates 12 having functional coatings 14 (Page 1 Paragraph 0002). Medwick et al teaches that the functional coatings 14 are those that protect the substrate from mechanical and/or chemical damage (Page 2 Paragraph 0011), which would include an anti-smudge hydrophobic layer. Medwick et al teaches that the removable coating 16 is deposited onto to provide protection of the substrate during processing of the glass substrate (Page 2 Paragraphs 0017-0018).

Medwick et al further teaches that the coating 16 is preferably no more than 2 micrometers but the exact thickness of the coating 16 is selected for a particular application

based on the degree of protection of desired, the type of substrate, ect. (Pages 5-6 Paragraph 0044).

Thus based on the teachings of Medwick et al it would have been obvious to one of ordinary skill in the art to modify the thickness of the protective coating during routine experimentation to determine an optimal coating thickness for whatever processing step that the glass substrate was being subjected to.

Medwick et al further teaches that the coating 16 comprises such polymers as polyvinyl alcohol and ethylene oxide polymer (Page 4 Paragraph 0032). The Examiner takes the position that since these types of polymers are water-soluble polymers that they would have high surface energies and that their surface energies would be higher than a hydrophobic low surface energy coating like that taught by Souel et al.

At the time the present invention was made it would have been obvious to one of ordinary skill in the art to have applied a temporary or removable protective coating to a ophthalmic lens to provide protection of the lens substrate and/or the functional coatings on the lens substrate during processing of the lens substrate as taught by Medwick et al.

As for the limitation that the protective coating enables the discharge to act on the outermost layer through the temporary coating, since the protective coating of Medwick et al has a higher surface energy than the outermost coating of Souel et al and that it would have been obvious to one of ordinary skill to have the thickness of the protective coating be less than 5 nm, it would be inherent that the protective coating of Medwick et al would allow for the discharge to act on the outermost layer through the protective coating.

Though Souel et al in view of Medwick et al teaches an exterior temporary layer having a surface energy higher than that of the outermost layer neither reference teaches that the temporary layer is an adhesion enhancing layer for enhancing adhesion of the face of the lens with a lens retaining shoe when trimming the lens.

Medwick et al does teach that the temporary protective coating may be any high emissivity composition that can be thermally decomposed without adversely impacting the substrate and/or underlying functional coating (Page 8 Paragraph 0059).

MacNutt teaches a method of removing an outermost layer of magnesium fluoride (Column 1 Lines 5-10) by a thermal treatment process (Column 2 Lines 23-44). Furthermore, MacNutt teaches that magnesium fluoride is a well known anti-reflection coating material for optical glasses (Column 1 Lines 43-52) and since magnesium fluoride has high ant-reflection characteristics it also has a high emissivity for energy and light. Furthermore, MacNutt teaches that the magnesium fluoride coating can be removed without adversely affecting the underlying substrate (Column 4 Lines 29-37).

At the time the present invention was made it would have been obvious to one of ordinary skill in the art to comprise the temporary layer out of magnesium fluoride. It would have been obvious to one of ordinary skill in the art to try magnesium fluoride as a material for the temporary protection layer of Medwick et al because, as it taught by MacNutt, it is a high emissivity composition that can be removed by thermal decomposition without adversely affecting the underlying substrate and it is a well known exterior layer for optical substrates.

Thus, since the temporary layer of Souel et al in view of Medwick et al and MacNutt render obvious a temporary layer having a surface energy higher than the outermost layer and a



thickness of less than about 5 nm as well as being comprises of magnesium fluoride, this layer would inherently have the properties of acting as a adhesion enhancing layer for enhancing the adhesion of the face of the lens with a lens retaining shoe when trimming the lens.

As for claim 2, as was discussed in the claim 1 rejection, Medwick et al teaches that the protective coating is preferably no more than 2 micrometers, thus anticipating the thickness range of approximately 2 nm to approximately 4 nm, and that the coating thickness is determined based on the level of protection desired and the type of processing the glass substrate is being subjected to (Pages 5-6 Paragraph 0044).

As for claims 4 and 5, as was discussed above the layer is comprised of magnesium fluoride.

As for claim 7, Medwick et al teaches that the protective coating is an evaporation product (Page 4 Paragraph 0033), thus it was deposited by evaporation and MacNutt teaches that the magnesium fluoride film is deposited by evaporation (Column 1 Lines 44-53).

As for claim 8, since Medwick et al teaches that the protective coating 16 can be deposited over the entire surface of the glass substrate 12 (Page 4 Paragraph 0029) and that the protective coating 16 is present when the glass substrate is trimmed (Page 2 Paragraph 0017) it would be inherent that the protective coating is deposited on a region of the face intended to be in contact with a shoe for retaining the lens during trimming.

As for claim 9, Medwick et al teaches that the protective coating has a substantially continuous structure (Page 6 Paragraph 0045).

As for claim 11, since the temporary protective coating covers and protects any underlying layers or surfaces it is a screen.

As for claim 14, Souel et al teaches that the hydrophobic layer can be a CRIZAL top coat (Column 3 Lines 7-10) and CRIZAL inherently comprises fluorinated groups.

As for claim 15, Souel et al teaches that the hydrophobic layer is deposited onto an antireflection coating on the lens (Column 3 Lines 18-25).

As for claims 16, Souel et al teaches the outermost coating comprises a plurality of layers (Column 3 Lines 7-25).

As for claim 19, Medwick et al teaches that the protective coating is removed or eliminated by dry wiping (Page 4 Paragraph 0031). Furthermore, MacNutt teaches that method of dry wiping away the magnesium fluoride coating are known in the art (Column 2 Lines 5-9).

As for claim 21, Medwick et al teaches washing with water, which has a pH substantially equal to 7, after trimming or cutting (Page 6 Paragraph 0049). Though Medwick et al teaches water washing of the substrate to remove the temporary coating, the Examiner takes the position that the washing with water of the substrate as taught by Medwick et al would continue past the removal of the temporary coating in order to fully clean the substrate. Furthermore, MacNutt teaches washing the lens with tap water, which is an aqueous solution with a pH substantially equal to 7, after removal of the temporary coating (Column 2 Lines 35-44).

In the case of claims 25 it is rejected for the same reasons as were discussed above in the claim 1 rejection. Furthermore, Medwick et al teaches removing the temporary layer after the substrate has been processed (Page 2 Paragraph 0017), specifically after cutting or trimming of the substrate (Page 6 Paragraph 0049).

9. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souel et al in view of Medwick et al and MacNutt as applied to claim 1 above, and further in view of Kimock et al (U.S. Patent # 5,190,807).

The teachings of Souel et al in view of Medwick et al and MacNutt as applied to claim 1 have been discussed previously. Souel et al teaches that underneath the outermost hydrophobic anti-smudge layer a hard coat and an anti-reflective coat have been deposited onto the surface of the substrate and these two layers would inherently be either a mineral or organic layer (Column 3 Lines 7-25). But neither Souel et al nor Medwick et al teach treating the surface of the lens by energetic and/or reactive substance capable of attacking and/or chemically modifying the surface prior to depositing a mineral or organic layer.

Kimock et al teaches a method for improving the adhesion of a hard coating to a optically transparent polymeric substrate by first treating the surface of the substrate with a reactive substance in the form of an adhesion-mediating polysiloxane polymer to chemically modify the surface of the substrate before depositing the hard coating (Column 4 Lines 48-68 and Column 5 Lines 1-17).

At the time the present invention was made it would have been obvious to one of ordinary skill in the art to treat the surfaces of a lens with a reactive substance to chemically modify the surface prior to deposition of one or more mineral or organic layers and a hydrophobic and/or oleophobic outermost layer. It would have been obvious to treat the surfaces of the lens of Souel et al by the method of Kimock et al prior to the deposition of the hard coating in order to improve the adhesion between the hard coat and the lens substrate.

As for claim 24, it would have been obvious to deposit the temporary protection layer on the second face of the lens so that the second face of the lens would receive protection during the processing steps of the lens.

### *Conclusion*

Claims 1-2, 4-5, 7-9, 11, 14-16, 19 and 21-25 have been rejected. Claims 3, 6, 10, 12-13, 18 and 20 have been withdrawn from consideration as being non-elected species. No claims have been allowed.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wiczorek whose telephone number is (571)270-5341. The examiner can normally be reached on Monday through Friday; 7:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on (571)272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Wieczorek/  
Examiner, Art Unit 1792

/Michael Cleveland/

Supervisory Patent Examiner, Art Unit 1792